What is claimed is:

1. A stereoscopic display device of a one-dimensional integral photography system, comprising:

a display unit including a display plane in which pixels are arranged flatly in a matrix shape; and

a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included,

a horizontal direction pitch of the parallax barrier being integer times a horizontal pitch of the pixels, the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier, and an image subjected to a perspective projection in a fixed viewing distance in a vertical direction and subjected to an orthographic projection in a horizontal direction being divided and arranged for respective columns of the pixels.

2. A stereoscopic display device of a one-dimensional integral photography system, comprising:

a display unit including a display plane in which pixels are arranged flatly in a matrix shape;

a parallax barrier including a plurality of apertures or a plurality of lenses and being configures to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included; and

a viewing distance adjusting mechanism which changes a vertical direction perspective projection image according to change in viewing distance,

the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier.

3. A stereoscopic display device of a one-dimensional integral photography system according to claim 2, wherein a horizontal direction pitch of the parallax barrier is integer times a horizontal pitch of the pixels, and an image which has been subjected to a perspective

projection defined by the viewing distance in a vertical direction and which has been subjected to an orthographic projection in a horizontal direction is divided and arranged for respective pixel columns.

4. A stereoscopic display device of a one-dimensional integral photography system according to claim 3, wherein the viewing distance adjusting function changes the width of the elemental image according to change in viewing distance and simultaneously enlarges/reduces the perspective projection image.

5. A stereoscopic display device of a one-dimensional integral photography system according to claim 3, wherein the viewing distance adjusting function changes the width of the elemental image by performing stepwise switching among fixed viewing distances.

6. A stereoscopic display device of a one-dimensional integral photography system according to claim 5, wherein the viewing distance adjusting function changes the width of the elemental image according to change in viewing distance and simultaneously enlarges/reduces the perspective projection image.

7. A stereoscopic display device of a one-dimensional integral photography system according to claim 5, wherein the viewing distance adjusting function changes the perspective projection image in a different viewing distance only in a vertical direction according to change in viewing distance within a constant range where the width of the elemental image is not changed.

8. A stereoscopic display device of a one-dimensional integral photography system, comprising:

a display unit including a display plane in which pixels are arranged flatly in a matrix shape;

a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included; and

a detecting mechanism configured to detect an out-of-viewing zone to the display plane in up and down or front and rear directions,

the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier.

9. A stereoscopic display device of a one-dimensional integral photography system according to claim 8, wherein the detecting mechanism is a vertical direction indicator.

10. A stereoscopic display device of a one-dimensional integral photography system according to claim 9, wherein the vertical direction indicator has a cyclic structure in a vertical direction.

11. A stereoscopic display device of a one-dimensional integral photography system according to claim 8, wherein the detecting mechanism has a blind structure.

12. A stereoscopic display device of a one-dimensional integral photography system according to claim 11, wherein the blind structure has a curved shape.

13. A stereoscopic display device of a one-dimensional integral photography system according to claim 11, wherein the blind structure has a cyclic structure in a vertical direction.

14. A stereoscopic display device of a one-dimensional integral photography system, comprising:

a display unit including a display plane in which pixels are arranged flatly in a matrix shape; and

a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included,

the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax

barrier, and the display plane of the display unit being formed in a shape of a curved face in a vertical direction, and the a perspective projection image in a vertical direction where the center point determined from the radius of curvature of the curved face is defined as a viewing distance position being displayed on the display plane.

15. A stereoscopic display device of a one-dimensional integral photography system according to claim 14, further comprising a curvature changing mechanism which changes the curvature of the display plane.

16. A stereoscopic display device of a one-dimensional integral photography system according to claim 1, further comprising a detecting mechanism which detects an out-of-viewing zone to the display plane in up and down or front and rear directions.

17. A stereoscopic display device of a one-dimensional integral photography system according to claim 16, wherein the detecting mechanism is a vertical direction indicator.

18. A stereoscopic display device of a one-dimensional integral photography system according to claim 17, wherein the vertical direction indicator has a cyclic structure in a vertical direction.

19. A stereoscopic display device of a one-dimensional integral photography system according to claim 16, wherein the detecting mechanism has a blind structure.

20. A stereoscopic display device of a one-dimensional integral photography system according to claim 19, wherein the blind structure has a curved shape.

21. A stereoscopic display method of a one-dimensional integral photography system, comprising:

displaying pixels in a display plane which are arranged flatly in a matrix shape; and

controlling directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included by a parallax barrier including a plurality of apertures or a plurality of lenses;

a horizontal direction pitch of the parallax barrier being integer times a horizontal pitch of the pixels, the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier, and an image subjected to a perspective projection in a fixed viewing distance in a vertical direction and subjected to an orthographic projection in a horizontal direction being divided and arranged for respective columns of the pixels.